ventional energy sources in the state; and

(d) the amount and target earmar ked for this purpose during the Eighth Five Year Plan in the State?

THE MINISTER OF STATE IN THE MINISTRY OF NON-CONVEN-TIONAL. ENERGY SOURCES (SHRI S. KRISHNA KUMAR): (a) Non-Conventional energy projects leased on solar energy, wind energy, biomass and small hydro have been taken up in Gujarat for generation of electricity.

The following systems have so far been installed in th^? State:

(i) Wind Energy Power	28 MW
(ii) Small Hydro Power	2 MW
(iii) Biomass Gasifiers	1.3 MW
(iv) Solar Photovoltaic Power Plants	14 *MW*
(v) Stand alone SPV systems for lighting and communitry facilities	2163 Nos.

(b) A total amount of Rs. 1.76 crores has been provided to the State during the last two years as per the folowing break-up;

(i) 1992-93	**Rs. 0.38 crore**
(ii) 1993-94	**Rs. 1.38 crores**

(c) The State Government has estimated a wind power potential of 5.000 MW based on the length of the coast in the State.

(d) State-wise allocation and targets have not been fixed for the Eighth Plan, Projects are taken up as per the guidelines and norms for each programme; and, depending upon their technical feasibility availability of budgetary resources and mobilisation of resources for private sector projects.

Pending Applicadtions before renewable energy development agency

5968. DR. SHRIKANT RAMCHAN-DRA JICHKAR: Will the PRIME MINISTER be pleased to state:

(a) what is th^ total amount of funds available with the Indian renewable Energy Development Agency Ltd. for disbursement during the current year for various projects;

(b) the number of applications pen ding before the agency alongwith the amount involved; and

(c) what is the mechanism of evaluation of sanctioned projects?

THE MINISTER OF STATE, IN THE MINISTRY OF NON-CONVENTIONAL ENERGY SOURCES (SHRI S. KRISHNA KUMAR): (a) IREDA has fixed a disbursement target of Rs. 189.42 crores for the year 1994-95. The resources for this will come through equity contribution by the Government reserves and surpluses of IREDA, repayment of loans by borrowers a:nid assistance from the World Bank under the "India Renewable Resources Development Project". The expected fund availability position with IREDA during 1994-95 is as follows:

(i) Liquidity	Rs. 5.30 crores
(ii) Reserves and Surpluses	Rs. 9.17 crores
(iii) Repayment of loans	Rs. 14.41 crores
(iv) Reimbursement from the World Bank of the loans already disbursed by IREDA during 1993-94	Rs. 25.94 crores
(v) Likely procurement of World Bank loan and grant	Rs. 152.84 crores
(vi) Equity contribution from Govt. of India	Rs. 14 crores.

(b) As on 31.3.1994, 24 applica. tions for loan assistance amounting to Rs. 43.61 crores from IREDA are pending with IRSDA.

(c) After the project is sanctioned an independent assessment of the progress of the project from an independent chartered accountant is required to be obtained by the project promoter in each case and the same furnished to IRKDA. Inspections by the officers of IREDA to assess the implementation of all the projects are done to make recommendations regarding requirements of funds to be released. 0n the basis of the above assessment the first instalment of loan assistance i.^ released _ The above process in normally repeated before any disbursement is made subsequently. IREDA also sometime engages the service of independent experts]professionals to assess the progress of the project. Further^ the progress of the implementation of the project is also monitored through periodical reports which are required to be sent to IREDA by the project promoter and through reports of Nominee Director on the Board of the assisted companies, wherever appointed by the IREDA.

Independent evaluation of the sanctioned project is also done in some cases on its completion. The task is assigned to outside consultants.

Bfomass *waste* to generate energy

5969. SHRI SATISH PRADHAN: Will the PRIME MINISTER be plea !3ed to state:

(a) whether Government have any plants to use Biomas waste to gene rate energy if so. what are the details thereof;

(b) whether any experiments have been carried out to use municipal waste water and Industrial waste wa ter to generate energy, if so, the re sults thereof; and

(c) whether Government would consider substantial -aid to the Municipalities desirous of installing energy generating plants?

THE MINISTER OF STATE IN THE MINISTRY OF NON-CONVENTIONAL ENERGY SOURCES (SHRI S. KRISHNA KUMAR): (a) Yes, Sir schemes have been evolved for utilisation of biomass waste to generate energy in rural, urban municipal aj;d industrial sectors. A programme for development of high rate bio-methanation process to utilise such wastes lias been initiated with partial assistance from UNDP|GEF at an estimated cost of Rs. 40 crores. The programme covers the setting up of 16 numbers demonstration projects for biomethanation including utilisation of the gas besides development of institutional framework, requisite expertise and capabilities, and creation of awareness etc., adoption of suitable technologies and qualitative and quantitative potential in different sectors and preparation of a shelf of mvesr-mant proposals are included in the objectives.

(b) Experiments have been carried out through R&D organisations national laboratories and others to use municipal waste water (Sewage) and industrial waste water (effluents) to generate energy in the form of biogas. Results have shown that yield of gas to be about 0.056 m3 per m3 of sewage having BOD level of 150 mg!l. Similarly, in case of distillery waste of 45000 mg[l BOD level, about 2.5 m3 gas can be generated from 1 m3 T'.'^ste.':. Sewage treatment plants ins-ralled at six locations under the Gan-ga Action Plan have been connected with biogas recovery system. Indust-rial effluents mainly distilery effluents (about 70 numbers) which are to be treated prior to discharge have also incorporated energy recovery .system.

(c) Substantial financial assistance is already being provided to State